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ABSTRACT

Forty-eight college students participated in a study that (1) explored the degree to which the reader response technique developed by W. F. Brewer and E. H. Lichtenstein to study artificial texts could be applied to natural texts, and (2) compared texts written over a wide time period and from two different literary traditions (six American and six Hungarian short stories written in two different time periods). The stories were divided into five roughly equal parts. After reading each part, subjects completed affective reader response scales that measured suspense, curiosity about the past, curiosity about the future, surprise, and irony. After reading the entire story, the subjects completed a questionnaire dealing with such issues as overall liking, degree of completeness, and degree of empathy. The overall pattern of results provided support for Brewer and Lichtenstein's structural-affect theory and showed that the reader response technique they developed for use with artifical texts could be used for natural texts. In addition, suspense and empathy were found to be particularly important variables in producing story liking for both American and Hungarian stories, and there were few differences in findings between the older stories and the more recent ones. (Appendixes contain a list of the stories and copies of the scales used in the study.) (FL)

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CENTER FOR THE STUDY OF READING

Technical Report No. 375

STORY STRUCTURE AND READER AFFECT IN AMERICAN AND HUNGARIAN SHORT STORIES

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March 1986

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Abstract

In this study, we intended to: (a) explore the degree to which the reader-response techniques developed to study artificial texts can be applied to natural texts; (b) test the structural-affect theory by W. F. Brewer & E. H. Lichtenstein (1982) with literary texts; and (c) carry out an initial empirical study comparing texts written over a wide time period and from two different literary traditions. Forty-eight undergraduates participated in the experiment. We selected a total of 6 American and 6 Hungarian short stories randomly from the larger sample consisted of 18 American short stories (3 from each decade from 1910 through 1969) and 18 Hungarian short stories (3 from each of the same decades) used in an interdisciplinary research project (cf., Martindale & Keeley, in press). The stories are divided into five roughly equal parts and at the end of each segment there were five 7-point affect reader-response scales designed to measure: Suspense, Curiosity about the Past, Curiosity about the Future, Surprise, and Irony. At the end of the story, there was a longer questionnaire containing 16 rating scales and questions dealing with issues such as overall Liking, degree of Completeness, and degree of Empathy. We found Suspense and Empathy to be the best predictors of overall story Liking. The overall pattern of results in this sample of American and Hungarian short stories provide considerable support for the structural-affect theory.

Story Structure and Reader Affect in American and Hungarian Short Stories

In a recent series of papers we have been developing a structural-affect theory of stories (Brewer, 1980, 1985; Brewer & Lichtenstein, 1981, 1982; Jose & Brewer, 1984). This approach was designed to deal with entertainment stories and has been tested with data derived from artificial texts written by the experimenters. In the present paper we intend to: (a) explore the degree to which the reader-response techniques developed to study artificial texts can be applied to natural texts; (b) test the structural-affect theory with literary texts; and (c) carry out an initial empirical study comparing texts written over a wide time period and from two different literary traditions (Hungarian and American short stories).

Structural-Affect Theory

In overview, the structural-affect theory attempts to relate particular structural features of narratives to particular affective responses in the reader and then to relate these structural-affective relationships to story intuitions and to overall judgments of liking.

Discourse and event structure. We distinguish between the events that underlie a narrative and the linguistic presentation of these events. This distinction was made explicit in the early

work of the Russian Formalists (Erlich, 1980) and continues to play an important role in current structuralist accounts of narrative (e.g., Chatman, 1978; Sternberg, 1978). We refer to the organization of the events in the underlying event world as event structure, and we refer to the temporal arrangements of these events in the text as discourse structure.

Affect. We hypothesize that one of the major characteristics of fictional texts is that they produce affective responses in the reader. Berlyne (1971) has developed a general theory of aesthetics in which he relates several general patterns of emotional response to pleasure and enjoyment. In particular, Berlyne has postulated that enjoyment is produced by moderate increases in arousal or by a temporary sharp rise in general arousal followed by arousal reduction. Our approach can be looked at as an attempt to apply this general hedonic theory to narrative texts.

Discourse structures. We have suggested that three of the most important discourse structures used in entertainment stories are--surprise structures, suspense structures, and curiosity structures. Each of these structures is based on a different arrangement of the discourse with respect to the underlying event structure and each is designed to produce a unique affect in the reader.

Surprise. We hypothesize that surprise is produced by including critical expository or event information early in the event structure, but omitting it from the discourse structure. The information is critical in the sense that it is necessary for the correct interpretation of the event sequence. In a surprise discourse structure the author withholds the critical information from the early sections of the text without letting the reader know that something has been withheld. Then, later in the text, the author reveals the critical information, producing surprise in the reader.

Suspense. We hypothesize that suspense is produced by including an initiating event or situation in the event structure. An initiating event is an event that has the potential to lead to a significant outcome (either good or bad) for one of the central characters in the narrative. In addition, the event structure must contain the outcome of the initiating event. In a suspense discourse structure the text is organized with the initiating event early in the text with considerable intervening material before the outcome is presented. The initiating event causes the reader to become concerned about the consequences for the character, the intervening material prolongs the suspense; and finally the occurrence of the outcome resolves the suspense for the reader.

Curiosity. We hypothesize that curiosity is produced by including a significant event early in the event structure. In a curiosity discourse structure the significant event is withheld from the reader but, unlike the surprise discourse structure, the author provides enough information about the earlier events to let the reader know that the information is missing. This discourse structure causes the reader to become curious about the withheld information and the curiosity is resolved by providing enough information in the later sections of the text for the reader to reconstruct the missing events.

Story liking. We relate the discourse organization and resulting affect to story liking. We predict that readers will enjoy narratives with a discourse organization that produce surprise and resolution, suspense and resolution, and curiosity and resolution.

Good and bad endings. Jose and Brewer (1984) have extended the structural-affect theory to deal with the valence of story outcome. In that paper we pointed out that a comprehensive theory of stories has to deal with the interaction of character valence (good or bad character) and outcome resolution (positive or negative outcome). We suggested that, for adults, liking of story outcomes is mediated through a "just world" belief schema. Thus, we hypothesized that adult readers will prefer texts in which good characters receive positive outcomes and bad characters receive negative outcomes.

Empirical Studies

We have carried out a number of empirical tests of the structural-affect theory. Brewer and Lichtenstein (1981) developed experimental passages that were designed to be clear examples of the three discourse organizations discussed above. In these studies we asked subjects to read the experimental narratives and then stopped them at fixed points and asked them to give us affect ratings (e.g., degree of suspense, surprise, or curiosity). In addition, after reading the whole text, the subjects were asked to give story intuition and liking judgments.

Affect curves. The three basic discourse organizations gave the predicted affect curves. Narratives with a surprise discourse organization showed a sharp rise on the surprise scale at the point where the critical information was introduced into the discourse. Narratives with a suspense discourse organization showed a strong rise in suspense rating and then a drop at the point of resolution. Similar narratives without a significant event showed little suspense. Narratives with a curiosity discourse organization showed a rise in curiosity when information about the significant event was introduced into the discourse and a sharp drop in curiosity when the significant event was disclosed in the discourse.

Liking judgments. Brewer and Lichtenstein (1981) also found the predicted relations between affect and story liking.

Narratives with the appropriate affect curves were liked better than those with none. Narratives with resolved affect were liked better than those in which the affect was not resolved.

Good and bad endings. Jose and Brewer (1984) carried out a story-rating study with elementary school children and found that older elementary school children have incorporated a "just world" view into their story-appreciation judgments. The older children (11 years of age) preferred narratives in which good characters were given positive outcomes and bad characters were given negative outcomes.

Complex Reader Responses

Entertainment stories. While the empirical studies reported above lend considerable support to the basic aspects of the structural-affect theory, it is clear that this theory captures only a part of the overall set of responses that individuals make while reading. Thus, for example, one needs to consider story content (e.g., stories about aliens or stories about cowboys). The structural-affect approach does not cover a number of other relevant affects (e.g., humor). A comprehensive story theory will have to include things such as story atmosphere (e.g., cheerful vs. gloomy) and literary style (context-sensitive use of vocabulary and syntax).

Literary stories. While there is no clear dividing line between popular stories and literary stories, there is rough

distinction that can be made in terms of the text's discourse force (cf., Brewer, 1980). Popular stories are those texts primarily intended to entertain, while literary texts are those texts primarily intended to persuade the reader, lead the reader to a new understanding, or to provide the reader with an aesthetic experience. Clearly, a comprehensive theory of stories will need to address the complex issues involved in accounting for readers' responses to literary stories.

Experiment

The purpose of the present experiment is to explore the degree to which the structural-affect theory and methodology can be extended to a diverse sample of natural stories, written over a wide time period, and deriving from two cultural traditions (American and Hungarian).

Method

Subjects. The subjects were 48 undergraduates at the University of Illinois who participated in the experiment in partial fulfillment of a course requirement.

Materials. The materials were taken from a larger sample of stories that are being used in an interdisciplinary research project (cf., Martindale & Keeley, in press). The larger sample consists of 18 American short stories (3 from each decade from 1910 through 1969) and 18 Hungarian short stories (3 from each of the same decades). For this experiment we randomly selected 1

American short story from each decade and 1 Hungarian short story from each decade for a total of 6 American short stories and 6 Hungarian short stories (see Appendix A for a list of the authors and titles of the stories used).

Procedure. The stories were divided into five roughly equal parts and at the end of each segment there were five 7-point affect rating scales. The scales were designed to measure: Suspense, Curiosity about the Past, Curiosity about the Future, Surprise, and Irony (see Appendix B for the exact wording of the scales). In addition, at the end of the narrative there was a longer questionnaire containing 16 rating scales and questions dealing with issues such as overall liking, degree of completeness, and degree of empathy (see Appendix C for the exact wording of these scales).

The subjects were asked to read the stories at their own pace and to fill out the scales as they came to them in their booklet. Each subject read one American story and one Hungarian story, with order counterbalanced across subjects. Each story was read by 7 to 9 subjects.

Results and Discussion

Characteristics of Individual Stories

The results of this study (partially displayed in Table 1 and Figure 1) give an enormous amount of information. One of the most instructive ways to organize this data is to use it to

characterize the individual stories. In the next section, we will attempt to provide a capsule description of the most salient characteristics of each of the 12 stories. First, we will discuss the American stories from the oldest to the most recent and then do the same for the Hungarian stories.

Insert Table 1 and Figure 1 about here

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(1) The Lost Phoebe by Theodore Dreiser describes the grief of an old man after the death of his wife. At first it appears that his wife may return from the dead in some supernatural manner, but for the remainder of the story it becomes evident that his search for her is due to the fact that he is slowly losing his grip on reality. In the last segment the old man falls over a cliff and dies.

The initial segment of the story is predominately setting information and our readers gave this segment the lowest rating on Suspense of any segment of any story in our sample. In the second segment of the story the old man's wife dies and the text leaves open the possibility that there may be some supernatural elements in the story. This prospect causes a dramatic shift in the Suspense rating and ratings for Suspense for this segment of the story are the second highest in our sample. However, from this point on the story does not show the high suspense curve of a

well-designed suspense structure; instead, the data show a steady drop in Suspense ratings. The old man's mental and physical condition deteriorates throughout the story until he dies in the last segment. Apparently our readers were relieved that his suffering was finally over since they gave this story the highest rating of any story in the sample on Outcome Satisfaction. They apparently also felt that, with his death, there were no unresolved elements in the plot since they gave this story by far the highest rating on the Completeness scale. It appears that our undergraduate readers could not empathize with a story about the death of an elderly farm couple since they gave this story the next to lowest rating on the Empathy scale. In addition to those aspects of the story just described, we feel that there is an important component in this story which was not measured by any of our scales--a pervasive atmosphere of sadness and decay. The structural-affect theory would predict that the relatively low Suspense and Empathy scores would lead to reduced Liking and our readers rated this story about in the middle of the distribution on overall Liking.

(2) The Double Birthday by Willa Cather is a story about a 55-year-old man of declining financial fortune who lives with his uncle, and renews his friendship with a woman he had known when they were much younger and he was much richer.

Our readers rated this story relatively low on the Suspense

scales and tended to place it in the middle of the distribution on many of the other scales. A major part of this story is devoted to characterization, and much of this aspect of the text is missed by our set of scales. Part of the information in the discourse of this story is given out of underlying event order and one whole section (the third) is presented as an explicit flashback. Our readers were apparently sensitive to this organization of the discourse and gave this story by far the lowest rating on the Arrangement scale. The story received an average score on overall Liking.

(3) The Daring Young Man on the Flying Trapeze by William Saroyan is a story about the despair of a young intellectual who is searching for a job and slowly starving to death. This story tended to receive average ratings on many of our scales. It did, however, receive the second highest rating on the Empathy scale from our college-age readers. This pattern of characteristics led it to a position of fourth from the top on the Liking scale.

(4) The Lottery by Shirley Jackson is a story that describes a whole town turning out for a lottery. At first it is not clear how important the outcome of the lottery is, but as the story progresses it becomes obvious that the lottery is a very significant event. However, it is not until the final segment that the reader finds out who "wins" the lottery and that the winner will be ritually stoned to death. This story looks as if

it were written for the structural-affect theory. The text is designed to provide strongly increasing suspense about who will win the lottery and what the consequences will be for the winner. In addition, the story has a classic surprise structure in which the author allows the reader to assume that the winner of the lottery will be rewarded and does not reveal that the outcome of the lottery will be a ritual death until the very last section of the text. Our readers' Suspense ratings showed the predicted rising and resolving suspense curve. The readers' responses on the Curiosity about the Future scale (a good index of suspense) in the next to last segment of this story was the highest rating on any scale for any story in this sample. The subjects gave it a mean of 6.3 on the scale in which 7.0 is the highest possible score. The structural-affect theory would also predict a strong peak in surprise in the last segment. Our readers' ratings on the Surprise scale are low on the initial segments of the story, but the last segment shows the highest rating given on this scale for any segment of any story (a mean score of 5.1). Given these patterns of responses by our readers, the structural-affect theory would predict high Liking scores; and our readers cooperated by giving The Lottery the highest Liking rating of any story in the sample.

(5) February 1999: Ylla by Ray Bradbury is a science fiction story in which a Martian woman comes into telepathic contact with

a crew member of the first spacecraft from Earth. Her husband becomes jealous about his wife's "dreams," prevents her from going to the landing site, and apparently kills the crew when they arrive. The initiating event in this story, the wife's dream about a blue-eyed giant from Earth, occurs in the first segment of the text. Our readers show an initial high Suspense rating on this segment. In the next to last segment of this story, the reader does not know if the spacemen from Earth have really landed or what the consequences were of the two shots that have been fired. This segment shows the second highest Suspense rating (5.8) for any segment of any story in our sample. This story also shows the highest Average Surprise rating of any story in our sample. However, the rating does not appear to be due to a surprise discourse organization, but to the fact that the science fiction setting leads to unexpected information in every segment of the text. This story shows relatively low Empathy ratings, presumably due to the fact that the main characters are aliens. In the final segment of this story it is fairly clear that the crew from Earth have been shot, but this information is never given explicitly in the text. This aspect of the story probably accounts for the fact that the readers' ratings on the Completeness scale place this story third from the bottom in our sample. The high Average Suspense ratings would predict high Liking ratings, although the low Empathy score would suggest some reduction of this measure. The subjects' actual ratings on Liking placed this story third from the top in our sample.

(6) Tell Me How Long the Train's Been Gone [last 1/4 of story] by James Baldwin is a story describing a young black boy's introduction to racism. He and his brother are detained by the police and later the boys' father and older brother relate this incident to the general role of Blacks in American culture. The first segment of this story contains a frightening encounter with two police officers, but then the remainder of the story consists of character description of the members of the boy's family and didactic discussion of racism. This organization of the text is reflected in our readers' ratings. This story shows the second highest Suspense ratings for the initial segment of any of our stories, while the third segment shows the second lowest rating for that segment in our sample. This story has a relatively negative and unclear ending--both boys are given a drink of rum. Our readers' response to this ending was to give it the third lowest rating for Outcome Satisfaction and the second lowest on Completeness. Our readers clearly picked up the didactic quality of the story and gave it the second highest rating on the Point scale. However, as might be expected from the inconsistent use of suspense, this story was in the middle of the distribution in terms of overall Liking.

(7) The Music Makers by Géza Csáth is the first of the Hungarian stories in our sample to be discussed. This is a story about a group of incompetent orchestra members in a small

Hungarian town. They are outsiders, not accepted by the town people, and eventually lose their jobs to new and better musicians. The author of this story gives the point overtly in the text in the last segment--a tragedy due to the poverty and lack of culture in Hungary in the second half of the 19th century. The first segments of this story are predominately description and there is no initiating event that would build concern for a modern American reader. Our undergraduates simply did not care what would happen next in the story. This text had the lowest rating on Average Suspense of any story in our sample. It also had the lowest rating on Average Surprise. The story received medium ratings on the Empathy scale. Our readers noticed the point presented explicitly in the text and gave this story the fourth highest rating on the Point scale. In keeping with the general predictions from the structural-affect theory, this story received the lowest ratings on overall Liking of any story in the sample.

(8) Samson and Delilah by Béla Illès is a story about a group of actors making a movie of a Biblical story. The actors strike for higher wages, are locked out of the studio, and while still in their Biblical costumes (with prop weapons) frighten away a group of right-wing thugs who were harassing working-class youth.

This story was the third lowest on Average Suspense and the lowest on Empathy. It was the next to lowest on both the Understandable scale and the Point scale. About the only

redeeming element this story had for our readers was that they liked its outcome--it was the fourth from the top of the scale on the Outcome Satisfaction scale. One aspect of this story that was not explicitly assessed by our scales was humor. The last segment seemed mildly amusing to us and it may be this aspect of the story that was being picked up by the Outcome scale. The story was given a moderately low rating on overall Liking.

(9) Adventure in Uniform by Sándor Hunyady is a story about a man from the upper classes who pretends to be of lower social class and has an affair with working class woman. The man tires of the affair and decides to reveal his deception to the woman. She works for a family he knows socially and so he decides to reveal his real social standing by attending dinner as a guest of the family. When the woman realizes what has happened she holds herself together and coolly walks away from him and from her job.

This story shows a classic rising suspense curve. It starts low (fourth lowest on Suspense in the second segment), but as the readers become concerned about the outcome of the man's decision to reveal himself as a dinner guest the suspense builds rapidly. By the last segment the suspense has risen to the point that this story has the second highest Suspense rating in our sample for this segment. This pattern of response results in a fourth place ranking in Average Suspense. Our undergraduate readers found the characters and their actions easy to identify with and gave this

story the highest Empathy rating of any story in our sample. They also gave this story the highest rating on the Point scale. However, it is interesting to note that most of our undergraduates interpreted the point as "one should be open and honest in interpersonal relations," while it seems likely that the author's intended point was to criticize social class distinctions. Given the high Suspense curve and the high Empathy score the structural-affect theory would predict a high Liking score, and the obtained Liking score was, in fact, high enough to place this story in the second highest position among the stories in our sample.

(10) The Deserter by Imre Sarkadi is a story about a soldier whose unit marches within a short distance of his farm home. He decides to leave his unit for one night's sleep in a bed. He does not tell his family that he is not on leave, and when he wakes up in the morning a group of officers have set up temporary quarters in his house. They ask for his papers, and when they find that he has no pass they take him outside and shoot him.

Our readers gave this story consistent moderately high scores. It was fifth highest on the Average Suspense scale and sixth highest on Empathy. It was second from the top on the Violence scale. It was fairly low on the Liking scale--fourth from the bottom among our sample. This story had a clear negative outcome, a characteristic which was not assessed by our scales, and this negative outcome may account for Liking scores being somewhat lower than one might expect from the Suspense and Empathy scores.

(11) The Youth of Master Konstantin by Milán Füst is a story about a young boy who takes care of a horse and cart. One day his boss replaces the old horse with a younger one. The boy misses the old horse; and, in the last segment, he finds out that his boss has sold the horse to the skinners.

Our readers gave this story relatively low ratings on suspense--it was fifth from the bottom on Average Suspense. The most outstanding feature of the story along the dimensions we assessed was its comprehension difficulty. It received, by far, the lowest rating on the Understanding scale. Despite the absence of an explicit reordering of the discourse, this story received the second lowest rating on the Arrangement scale. Overall, the story was not well liked. It was third from the lowest in our sample on the Liking scale.

(12) The Nazis by Ferenc Sánta is a story in which two armed men on horseback come up behind an old man and boy. The riders sit there quietly, and the old man and boy attempt to ignore their presence. The riders ask the two some questions and show their complete dominance with little overt use of violence. They force the boy to say that his dog is a goat. Then the two horsemen ride away.

Our readers found this story to have high suspense. It received the highest score for first segment Suspense of any story in our sample and the second highest score on Average Suspense.

Yet, even with this high Suspense score, this story showed low ratings on overall Liking (second lowest in the sample). It seems to us that this low rating on the Liking scale was produced by some other rather striking characteristics of this story. The characters in this story receive minimal character development and there is no description of their internal mental states. Our readers respond to this mode of presentation by rating this story third from the lowest on the Empathy scale. This story also receives the lowest score in our sample on the Completeness scale. This is probably a reflection of the fact that it is not immediately obvious why the horsemen are asserting their power over the old man and boy, or why they leave when they do. Finally, this story has a general atmosphere of brutalization and evil that is not properly assessed by our rating scales.

Consistency Across Readers

Perhaps the most striking finding in this analysis of the individual stories is the strong degree of consistency across subjects. The story-rating procedure has worked very well in our earlier research (Brewer & Lichtenstein, 1981, 1982; Jose & Brewer, 1984); however, all these studies used carefully controlled artificial texts. Naturally occurring literary texts, such as used in the present study, are very complex objects that differ from one another on an enormous number of dimensions. It seemed to us that individual readers probably respond to these

texts in very different ways since one reader may like mystery stories and dislike romances, while another reader may have just the opposite preferences. Thus, when we set out to design this experiment, we thought that it would be difficult to obtain clear results and that probably the best we could hope for would be a few overall differences developed by averaging data across large numbers of subjects. However, the results just presented suggest that our rating scales are quite sensitive and that there is considerable agreement across subjects in their response to this diverse sample of short stories.

Not only is there considerable consistency within our undergraduate readers, but it is comforting to find that they show considerable agreement with the experimenters' responses to these stories. Before examining the data in this study the first author made extensive notes as he read each story for the first time. A comparison of these qualitative remarks with the quantitative rating scores shows considerable agreement. For example, for the initial story segment, the undergraduates gave their highest ratings to The Nazis and Tell Me. For these two stories the experimenter had written: "immediate high suspense" and "sudden strong suspense." Similarly, for the five stories rated lowest by the undergraduates on this scale, the experimenter had written (starting with the lowest): "little suspense," "little suspense," "incomprehensible," "low suspense," and "low

suspense." Note that this agreement is not between the experimenter and one small group of subjects. Since each subject read only two stories, the comparisons just described are, for the most part, based on different samples of subjects.

Story Characteristics Not Assessed

When we designed the rating scales to be used in this study of natural stories, we added a number of scales beyond those we had used in our earlier work with experimentally designed texts. However, the analysis of the individual stories suggests that even with our expanded set of scales we have missed several important dimensions of these stories. In particular, if one looks back at our analysis, we occasionally provide ad hoc explanations for the readers' overall Liking ratings when these ratings deviated from the predictions of our structural-affect theory. In future work with natural stories, it seems to us that we would want to assess the reader's response to the story outcome (i.e., "good" versus "bad" outcomes). If we had such a measure in the present study, we could test our assertion that the subjects' Liking scores for The Deserter were reduced because of the bad outcome. We would also want to have a set of scales measuring story "atmosphere." If we had scales of this type in the present study, we could test our assertion that the subjects' responses to The Nazis was influenced by the overall feeling of evil in this story or that their responses to Phoebe were influenced by the pervasive feeling of gloom in this story.

Artificial versus Natural Stories

While it is hard to make strict comparisons of the results of this study with those of our earlier studies using artificial texts, a few general suggestions do emerge. In the earlier studies by Brewer and Lichtenstein (1981, 1982) we focused on discourse structures for suspense, surprise, and curiosity. The results of the present study suggest that suspense is, by far, the most important of these structures in our sample of natural texts. In the earlier studies with artificial texts we found story resolution to be a crucial variable. However, with the natural stories in the present sample, the construct of story resolution is much more complex. In these stories it appears that one can have not only resolution at one level or of one issue but nonresolution of other aspects of the story. Thus, in the present study the Completeness scale did not seem to play a consistent role. Finally, the Jose and Brewer (1984) study emphasized the importance of reader identification and this was certainly supported by the impact of the Empathy scale in the present study.

Stepwise Regression

In the discussion of the individual stories, we have used the patterning of the data and the predictions of the structural-affect theory to guide our analysis. While this seems convincing, it would be good to have a more objective analysis to back up this

treatment. At the level of individual stories the small sample sizes do not lend themselves to elaborate statistical treatment. However, it is possible to look at these variables across all of the stories and provide some support for our more qualitative analyses of the individual stories. Therefore we carried out a stepwise regression on story Liking collapsing across all 12 stories. The variables entered into the regression were: Average Suspense, Average Surprise, Average Irony, Outcome Satisfaction, Completeness, Arrangement, Empathy, Understandable, Literary, Point, Violence, Eroticism, Romanticism, Insight, and Suspense Drop (Suspense on segment 4 minus Suspense on segment 5).

Given the limited number of stories in our sample we decided to use a conservative criterion ($F > 10$) for entering variables into the regression. Using this criterion, two variables entered into the regression: Empathy and Average Suspense. The correlation of Empathy with Liking was .42; the correlation of Average Suspense with Liking was .42; and the multiple correlation was .53. These statistical results clearly support both the structural-affect theory and the individual story analyses given earlier. The importance of suspense in determining story liking follows from the original formulation of the structural-affect theory by Brewer and Lichtenstein (1981, 1982); and the important role of empathy in story liking follows from the work of Jose and Brewer (1984). The statistical results also support the

individual story analyses. The pattern of scores for the individual stories frequently suggested that the Suspense measures and the Empathy measure played a critical role in overall story Liking for our readers, and this was confirmed by the results of the stepwise regression which showed that Suspense and Empathy were the best predictors of overall story Liking.

Hungarian versus American Stories

Our analysis of the individual stories suggests that there are no qualitative differences between the sample of Hungarian stories and the sample of American stories. The most liked story in our sample was an American story (Lottery), but the next most liked story was Hungarian (Adventure). The story with highest Suspense in the first segment was Hungarian (Nazis), but the story with the next highest Suspense score on this segment was American (Tell Me). This suggests that writers from both literary traditions make use of similar discourse organizations to produce reader affect. The author of one of the Hungarian stories (Music) gave the point of the story overtly in the text, a convention not frequently found in American short stories. However, this occurred only once in the Hungarian sample so obviously it should not be interpreted as a literary convention with a cultural difference. This example does suggest the type of finding that could have shown up in our comparison. If most of the Hungarian stories had used this convention and none of the American stories used it, then we would have fairly strong evidence for a cultural difference in the two literary traditions.

Our analysis of the individual stories showed that there were enormous differences among these stories on our reader response measures. Therefore, we feel that we must be very cautious about making any claims about quantitative differences in the stories due to the time period they were written or to the literary tradition they came from. It is likely that chance occurrence of a story with extreme scores (e.g., Lottery) in a small sample of stories could produce a significant difference all by itself. Nevertheless, we did carry out a few analyses across the stories to see what they suggest.

The results of the comparison of American and Hungarian stories on the major variables can be seen in Table 2.

Insert Table 2 about here

The most striking finding is that on these types of reader response measures there is remarkably little difference between the two sets of stories. A one-way analysis of variance showed that there were, in fact, no significant differences ($p < .05$) on any of the variables. To the degree that one can generalize from this limited sample, it appears that there are not major differences along the structural-affect dimensions for the stories from these two countries.

All of these results are based on ratings made by American readers. This raises the issue of what might occur if this study were carried out using Hungarian readers. It seems to us that there are three possible outcomes: (a) It might turn out that contemporary Hungarian and American readers would respond to the content and the structural-affect characteristics of these stories in the same fashion. For example, Hungarian undergraduates might find it just as hard to identify with the characters in the Hungarian story Samson and Delilah as did our American undergraduates and thus give this story an equally low rating on Liking. (b) A second possibility is that the Hungarian readers would show cultural differences in how they reacted to the content of the stories but would then show the relationships outlined in the structural-affect theory. For example, the Hungarian undergraduates might, in fact, find it easy to identify with the Hungarian characters in Samson and Delilah and then show much higher Liking ratings for this story. (c) Finally, the Hungarian readers might show differences in the relations between the basic constructs of the structural-affect theory. For example, Hungarian readers might show high Suspense ratings and high Empathy ratings for a story such as Adventure in Uniform but give it low Liking ratings. See Brewer (1985) for a more detailed discussion of the ways in which narrative texts could show cultural differences.

Old versus Recent Short Stories

The results of the comparison of older Hungarian and American stories (1910-1939) with the more recent Hungarian and American stories (1940-1969) is given in Table 3.

Insert Table 3 about here

Here there are some larger differences. A one-way analysis of variance showed that the more recent stories were significantly ($p < .05$) higher on Average Suspense, Average Curiosity about the Past, Average Curiosity about the Future, Interest, and Violence. The older stories were significantly higher on Completeness and Romanticism. Again, because of the small sample size we think it is best to treat these differences with caution. However, the results do suggest that there may have been some trends in the structural-affective properties of short stories over time that operated within both literary traditions.

Summary

The results of this study show that the reader response technique developed by Brewer and Lichtenstein for artificial texts can be used for natural texts. The overall pattern of results in this sample of American and Hungarian short stories provide considerable support for the structural-affect theory. In these stories we found suspense and empathy to be particularly

important variables in producing story liking as would be expected from the structural-affect approach. In modifying the rating scales for this study, we added a number of scales to those used in our previous work with artificial texts. However, the results from the individual story analysis suggested the need for an even more elaborate set of rating scales. In particular, it seemed that we needed scales to assess positive and negative outcome and the overall story atmosphere (e.g., sad, cheerful).

The comparison of the Hungarian and American short stories suggested that there were few differences on structural-affective variables for our sample of stories from these two different cultural traditions. There were a few differences between the older (1910-1939) Hungarian and American stories and the more recent (1940-1969) Hungarian and American stories suggesting some common influences on these two cultural traditions. However, these findings need to be replicated with much larger samples of stories. Overall, it seems to us that these findings open up a large role for the reader-response technique and the structural-affect approach in the study of short stories, both within a culture and across cultures.

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Appendix A: Stories Used in this Experiment

American Stories

Theodore Dreiser	The Lost Phoebe 1910-1919 (1)
Willa Cather	Double Birthday 1920-1929 (2)
William Saroyan	The Daring Young Man on the Flying Trapeze 1930-1939 (2)
Shirley Jackson	The Lottery 1940-1949 (2)
Ray Bradbury	February 1999: Ylla 1950-1959 (2)
James Baldwin	Tell Me How Long the Train's Been Gone 1960-1969 [last 1/4 of story] (2)

Hungarian Stories

Gèza Csàth	The Music Makers 1910-1919 (3)
Bèla Illès	Samson and Delilah 1920-1929 (3)
Sàndor Hunyady	Adventure in Uniform 1930-1939 (3)
Imre Sarkadi	The Deserter 1940-1949 (3)
Milàn Füst	The Youth of Master Konstantin 1950-1959 (3)
Ferenc Sànta	The Nazis 1960-1969 (3)

(1) Foley, M. (Ed.). (1965). Fifty best American short stories 1915-1965. Boston: Houghton Mifflin.

(2) Foley, M. (Ed.). (1975). 200 years of great American short stories. Boston: Houghton Mifflin.

(3) Illès, L. (Ed.). (1979). 44 Hungarian short stories. Budapest: Corvina Kiado.

Appendix B: Rating Scales Given After Each Segment of Text

[note-subjects were not given the names of the scales]

1. [Suspense] At this point, to what extent do you now feel anticipation, excitement, or anxiety about event yet to come in the passage?

Not at all 1 2 3 4 5 6 7 Very Much

2. [Curiosity about Past] At this point, to what extent do you now want to learn more about past events (events which already occurred in the passage up to this point, or which occurred before the passage began)?

Not at all 1 2 3 4 5 6 7 Very Much

3. [Curiosity about Future] At this point, to what extent do you want to learn more about events yet to come in the passage?

Not at all 1 2 3 4 5 6 7 Very Much

4. [Surprise] In the portion just read, to what extent did you feel surprised by any information or events in the passage?

No Surprise 1 2 3 4 5 6 7 Very Surprised

5. [Irony] In the portion just read, to what extent did you feel irony in relation to information or events in the passage?

No Irony 1 2 3 4 5 6 7 Much Irony

Appendix C: Rating Scales Given at the End of Each Story

[note--subjects were not given the names of the scales]

The passage you have been reading is now over. Please answer the following questions:

1. [Liking] Overall, how much did you enjoy, appreciate, or like the passage?

Did Not Like 1 2 3 4 5 6 7 Liked Very Much

2. [Interest] During your reading, to what extent did you feel either bored or interested while reading the passage?

Very Bored 1 2 3 4 5 6 7 Very Interested

3. Some of the passages used in this experiment may be stories, and some may not be stories. To what extent do you consider that this passage, as given to you, makes a "story"?

NS (Not a Story) ? (Not Sure) S (Is a Story)

4. [Outcome Satisfaction] To what extent were you satisfied with the outcome of the passage?

Very Unsatisfied 1 2 3 4 5 6 7 Very Satisfied

5. [Completeness] To what extent did the passage seem complete?

Incomplete 1 2 3 4 5 6 7 Complete

6. [Arrangement] Was the information in the passage correctly arranged? That is, was the information given at the best possible times to produce as effective a story as would be possible from this material?

Not Arranged Cor. 1 2 3 4 5 6 7 Arranged Correctly

7. [Empathy] To what extent did you empathize or identify with the character(s) in the passage?

Not at All 1 2 3 4 5 6 7 A Great Deal

8. [Understandable] To what extent could the information and events in the passage be understood?

Not Understand. 1 2 3 4 5 6 7 Clearly Understandable

9. [Literary] To what extent did the passage seem to you to have the characteristics of "a piece of literature"?

Not Literary 1 2 3 4 5 6 7 Very Literary

10. [Typical Story] To what extent do you consider that the passage fits your idea of a "typical story"?

Not a Story 1 2 3 4 5 6 7 Very Typical Story

11. [Point] To what extent did you think that this passage had a point, moral, or message (aside from the point of entertaining the reader)?

No Point 1 2 3 4 5 6 7 Obvious Point

If you thought there may have been a point, briefly tell us what it may have been:

12. [Violence] To what extent did you find the passage violent?

Not Violent 1 2 3 4 5 6 7 Very Violent

13. [Eroticism] To what extent did you find the passage erotic?

Not Erotic 1 2 3 4 5 6 7 Very Erotic

14. [Romanticism] To what extent did you find the passage romantic?

Not Romantic 1 2 3 4 5 6 7 Very Romantic

15. [Insight] To what extent did you think that the author was trying to express an insight about human nature, or a truth about the "human condition"?

No Insight 1 2 3 4 5 6 7 Definite Insight

16. Have you ever either read this passage, or read or seen a story based on it, before?

No Yes

Table 1

Mean Rated Story Characteristics

American Stories

	Suspense	Curiosity Past	Curiosity Future	Surprise	Irony
The Lost Phoebe	3.4	2.1	4.0	2.8	2.4
Double Birthday	3.2	3.2	3.8	3.1	2.8
The Daring Young..	3.6	3.5	3.8	3.5	3.1
The Lottery	4.5	3.9	5.0	3.2	2.7
February 1999:Ylla	5.1	4.2	5.2	4.1	3.6
Tell Me How Long..	3.9	4.2	4.3	3.6	2.8

Hungarian Stories

	Suspense	Curiosity Past	Curiosity Future	Surprise	Irony
The Music Makers	2.9	2.9	3.2	2.7	3.1
Samson and Delilah	3.2	2.2	3.7	3.4	2.6
Adventure in Uniform	4.2	3.4	4.7	3.7	3.2
The Deserter	4.1	3.2	4.7	2.9	2.3
The Youth of Master..	3.4	2.5	3.6	3.0	2.5
The Nazis	5.1	4.1	5.4	3.6	3.2

(table continues)

Table 1

Mean Rated Story Characteristics

American Stories

	Liking	Interest	Outcome	Complete-ness	Arrange-ment
The Lost Phoebe	3.8	3.4	5.1	5.8	5.5
Double Birthday	3.9	3.1	4.0	4.0	3.0
The Daring Young..	4.6	4.3	4.3	4.9	5.0
The Lottery	5.6	5.4	4.6	5.1	6.3
February 1999:Ylla	4.8	4.8	3.8	3.4	5.3
Tell Me How Long..	3.8	4.1	3.1	3.3	4.3

Hungarian Stories

	Liking	Interest	Outcome	Complete-ness	Arrange-ment
The Music Makers	3.0	2.8	3.9	4.1	4.9
Samson and Delilah	3.8	2.9	4.3	4.3	4.4
Adventure in Uniform	5.4	5.1	3.0	4.5	5.6
The Deserter	3.6	4.6	4.0	4.3	5.1
The Youth of Master..	3.6	3.2	3.7	4.0	4.2
The Nazis	3.1	3.8	3.0	3.0	5.6

(table continues)

Table 1

Mean Rated Story Characteristics

American Stories

	Empathy	Understandable	Literary	Typical Story	Point
The Lost Phoebe	3.4	5.1	4.5	4.9	3.3
Double Birthday	4.0	4.6	4.4	3.1	3.3
The Daring Young..	5.3	4.7	5.3	4.1	3.9
The Lottery	5.3	5.9	5.8	4.4	3.8
February 1999:Ylla	3.8	5.5	5.1	4.4	2.8
Tell Me How Long..	3.9	5.5	4.3	3.6	4.9

Hungarian Stories

	Empathy	Understandable	Literary	Typical Story	Point
The Music Makers	4.8	4.8	4.0	3.5	4.4
Samson and Delilah	3.0	4.4	4.0	4.0	3.1
Adventure in Uniform	5.8	5.8	5.0	4.6	5.5
The Deserter	4.4	5.6	5.4	4.7	4.4
The Youth of Master..	4.8	3.8	4.4	4.0	3.3
The Nazis	3.5	5.8	5.0	3.8	4.3

(table continues)

Table 1

Mean Rated Story Characteristics

American Stories

	Violence	Eroticism	Romanticism	Insight
The Lost Phoebe	1.4	1.6	4.6	4.6
Double Birthday	1.8	2.1	2.8	4.1
The Daring Young..	2.0	1.9	2.9	4.9
The Lottery	5.5	2.1	1.4	5.8
February 1999:Ylla	2.9	2.6	3.9	5.1
Tell Me How Long..	3.1	1.6	1.4	5.1

Hungarian Stories

	Violence	Eroticism	Romanticism	Insight
The Music Makers	2.1	1.6	2.0	4.3
Samson and Delilah	3.5	1.6	1.6	4.6
Adventure in Uniform	2.1	2.8	5.9	5.3
The Deserter	4.9	2.1	1.9	5.6
The Youth of Master..	3.2	2.1	1.9	4.7
The Nazis	4.0	2.1	1.6	4.5

Table 2

Mean Ratings Hungarian versus American Short Stories

	American	Hungarian
Suspense	3.9	3.8
Curiosity about Past	3.5	3.0
Curiosity about Future	4.3	4.2
Surprise	3.4	3.2
Irony	2.9	2.8
Liking	4.4	3.7
Interest	4.2	3.7
Outcome Satisfaction	4.1	3.6
Completeness	4.4	4.0
Arrangement	4.9	5.0
Empathy	4.2	4.4
Understandable	5.2	5.0
Literary	4.9	4.6
Typical Story	4.1	4.1
Point	3.6	4.1
Violence	2.8	3.3
Eroticism	2.0	2.1
Romanticism	2.8	2.5
Insight	4.9	4.8

Table 3

Mean Ratings Older versus More Recent Stories

	Old (1910-1939)	New (1940-1969)
*Suspense	3.4	4.3
*Curiosity about Past	2.9	3.7
*Curiosity about Future	3.8	4.7
Surprise	3.2	3.4
Irony	2.8	2.8
Liking	4.0	4.1
*Interest	3.6	4.3
Outcome Satisfaction	4.1	3.7
*Completeness	4.6	3.8
Arrangement	4.7	5.1
Empathy	4.3	4.3
Understandable	4.9	5.3
Literary	4.5	5.0
Typical Story	4.0	4.1
Point	3.9	3.9
*Violence	2.1	3.9
Eroticism	1.9	2.1
*Romanticism	3.3	2.0
Insight	4.6	5.1

* $p < .05$

Figure 1: Relative Position of Each Story on Each Rating Scale

	LIKING	INTEREST	OUTCOME	COMPLETENESS
7				
				PHOEBE
	LOTTERY			
	ADVENTURE	LOTTERY		
		ADVENTURE	PHOEBE	LOTTERY
5				DARING
	YLLA	YLLA		
	DARING	DESERTER	LOTTERY	
				ADVENTURE
		DARING	DARING/S & D	DESERTER/S & D
		TELL ME		MUSIC
4			DESERTER/BIRTHDAY	BIRTHDAY/YOUTH
	BIRTHDAY		MUSIC	
	TELL ME/PHOEBE/S & D	NAZIS	YLLA	
			YOUTH	
	DESERTER/YOUTH			
		PHOEBE		YLLA
				TELL ME
		YOUTH		
	NAZIS	BIRTHDAY	TELL ME	
3	MUSIC		NAZIS/ADVENTURE	NAZIS
		S & D		
		MUSIC		
2				
1				

	ARRANGEMENT	EMPATHY	UNDERSTANDABLE	LITERARY
7				
	LOTTERY			
			LOTTERY	
6		ADVENTURE	ADVENTURE/NAZIS	LOTTERY
	NAZIS/ADVENTURE		DESERTER	
	PHOEBE		YLLA/TELL ME	
				DESERTER
	YLLA	DARING/LOTTERY		DARING
	DESERTER		PHOEBE	YLLA
5	DARING			ADVENTURE/NAZIS
	MUSIC			
		YOUTH/MUSIC	MUSIC	
			DARING	
			BIRTHDAY	
				PHOEBE
	S & D	DESERTER	S & D	YOUTH/BIRTHDAY
	TELL ME			TELL ME
	YOUTH			
4		BIRTHDAY		MUSIC/S & D
		TELL ME		
		YLLA	YOUTH	
		NAZIS		
		PHOEBE		
3	BIRTHDAY	S & D		
2				
1				

Figure 1: Relative Position of Each Story on Each Rating Scale (continued-2)

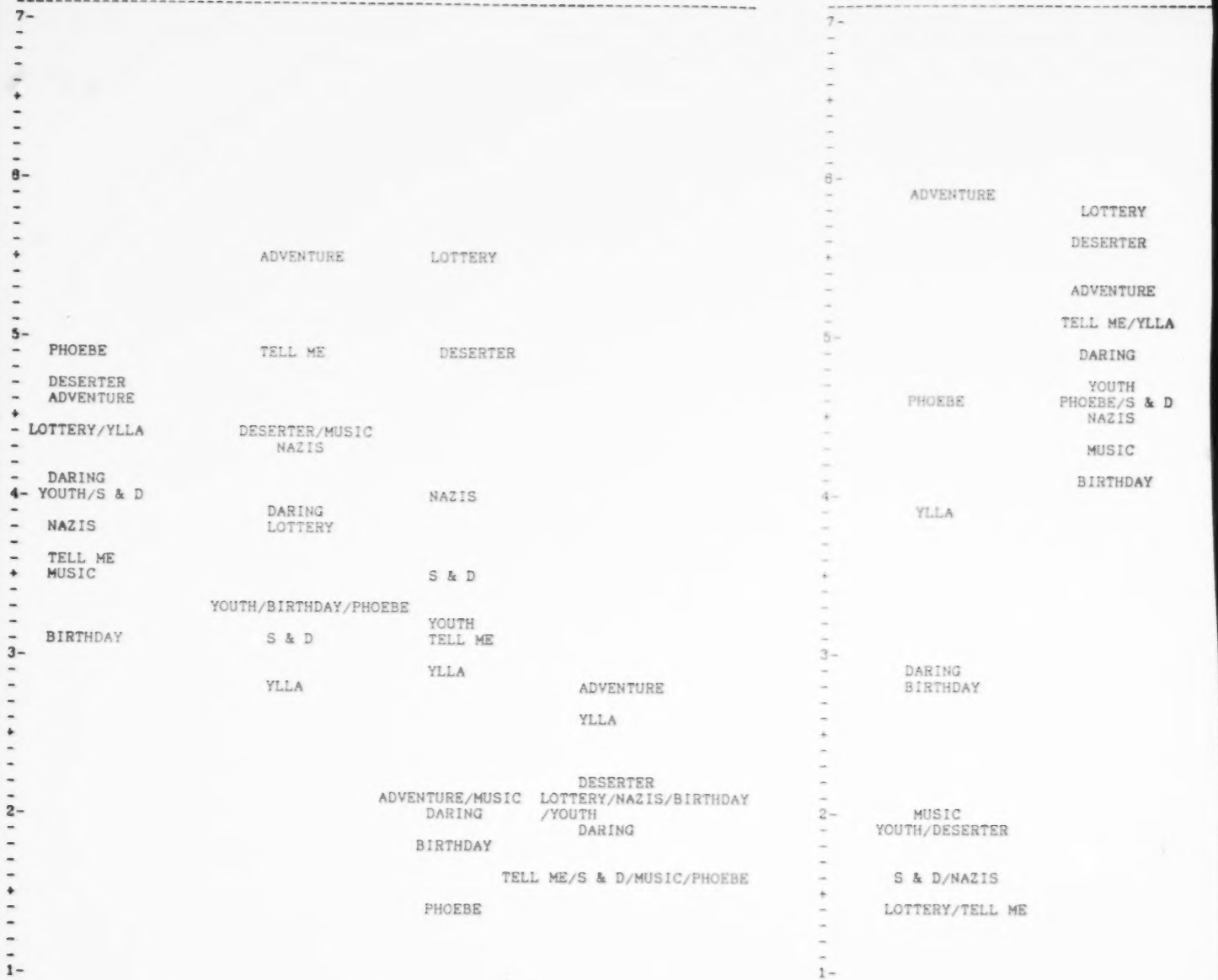

Figure 1: Relative Position of Each Story on Each Rating Scale (continued-3)